

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Emergency Communications by)	GN Docket No. 12-91
Amateur Radio and Impediments to)	
Amateur Radio Communications)	
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To the Commission:

**Late-Filed Reply Comments to
John A. Carroll, W1PK**

I am a certified electronics technician (ISCET and iNARTE) and an Extra Class amateur radio operator (call sign N3NL). I hold an FCC General Radiotelephone Operator License with a Ship Radar Endorsement. I am an inventor holding three U.S. Patents. My latest patent is a wireless bus for digital devices and computers (U.S. Patent # 6,771,935). I have a Master of Arts degree in Political Science from the Johns Hopkins University.

I am one of the original petitioners for the establishment of the Low Power FM (LPFM) radio broadcasting service (RM-9208 July 7, 1997 subsequently included in MM Docket 99-25). I am also one of the petitioners in the docket to establish a low power radio service on the AM broadcast band (RM-11287). I have filed a total of over 200 formal comments with the FCC over the years since the 1970s. I have filed comments with other Federal agencies as well including the FAA, EPA, and the TSA.

Limitations Attributable to FCC Rules

In his comments, Mr. Carroll makes the following suggestion:

“Some exceptions to the 1 KW limit might be considered. Moon bounce could potentially be a no-infrastructure long-haul alternative to HF when ionospheric conditions are marginal or worse, but the present power limit forces an uncomfortable tradeoff between signal bandwidth and antenna size. At 500W or so, data rates with moderate size antenna arrays amount to a few characters per minute. It's possible to exchange call signs that way and get a contact, but it's not sufficient for message traffic. “

The Moon can serve as a communications relay reflector that will serve locations on Earth that are in view of the Moon. This direct contact is available regardless of the status of the Internet, telephone networks, or the ionosphere itself. High-power amateur radio stations using moon bounce can serve as communications trunk lines linking parts of the nation and the World during major long-duration emergencies.

Recommended Action

The Commission should seriously consider Mr. Carroll's suggestion. Indeed, the Commission should probably establish a Notice of Inquiry (NOI) to thoroughly examine this potential innovation for long haul communications during serious emergencies.

Respectfully Submitted,

Nickolaus E. Leggett

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June 13, 2012

A copy of this reply comment has been sent by First Class mail to Mr. Carroll at the following address.

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